Team E

Terraform Project 5 – Azure Cloud

Team Members:

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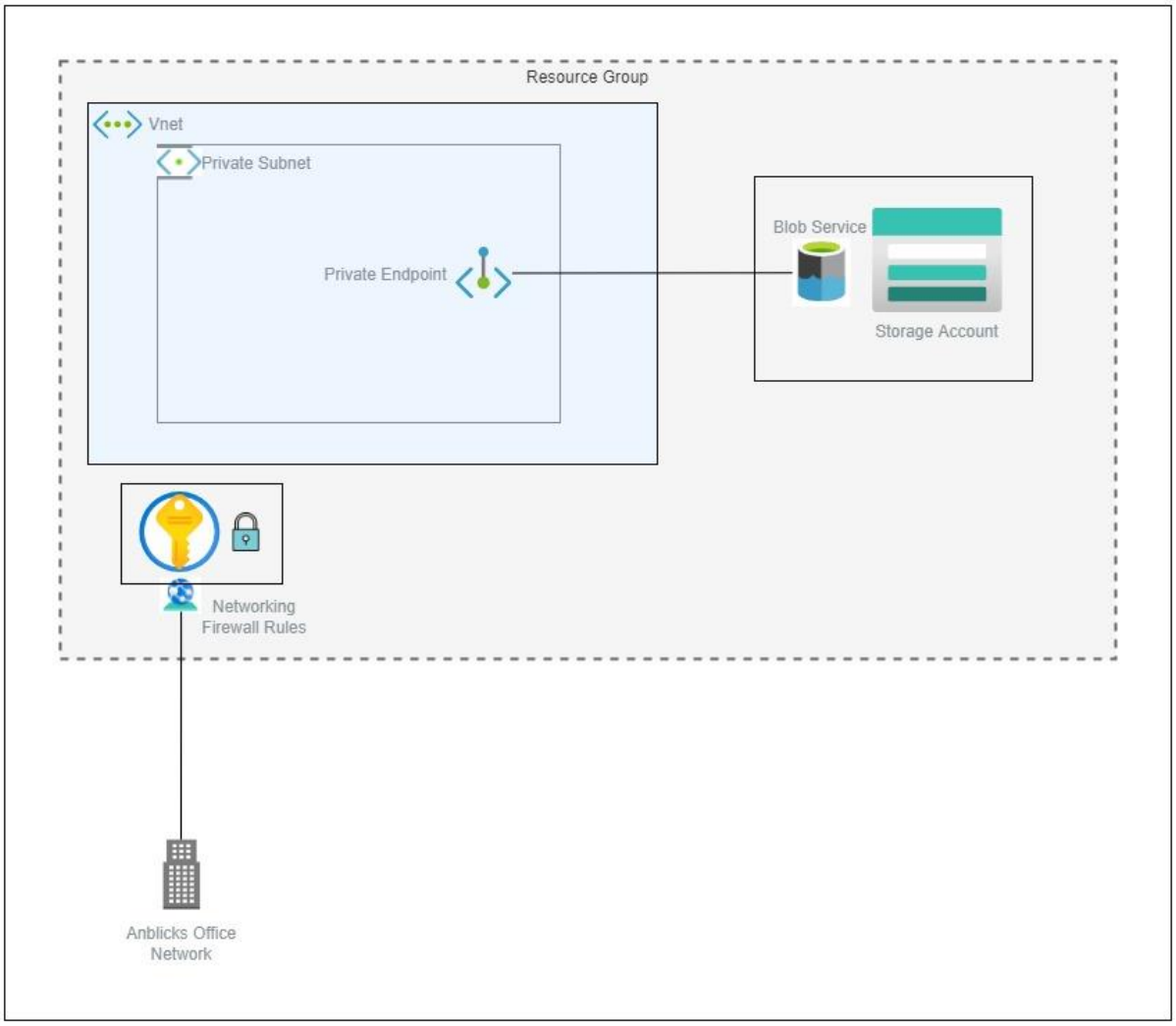
Last Date of Submission: ***31st December 2021***

Need to create Terraform scripts that create resources as per requirements mentioned below. Following diagram is shown for reference:



Azure Subscription to be used: ***Anblicks IP***

Resource Group to be used for all resources: ***rg-teame-dev-01***

- Create 1 Virtual Network
- Create 1 Subnet (PrivateSubnet)
- Create a Storage Account with hierarchical namespace enabled(ADLS)
- Create a Private Link/Endpoint for the Blob service in the PrivateSubnet for that Storage Account
- Create a SAS token for your storage account with access to only Blob services
- Create a Key Vault and store the above created SAS token in a Secret inside the Key Vault
- Key Vault should have Firewall and Network rule that allows access to Key Vault only from Anblicks Public IP
- Following different Terraform modules should at least be created for re-usability:
    - Virtual Networks
    - Subnets
    - Storage Accounts
    - Private Link/Endpoints
    - Key Vault
    - Key Vault Secret

Important things to take care:

- Access/Secret Key for AWS authentication or any such credentials related to AWS or Azure and its resources should not be stored in any terraform script file
- State file should not be managed locally, and a remote backend should be used (S3 for AWS Projects and Storage Account Container for Azure Projects)
- It is mandatory to provide variable "Description" and "Type" wherever declared
- Properties like Virtual Machine Type, Storage Size, Storage Type, etc. should be parameterized and configurable as per need by managing in a single "tfvars" file.
- Wherever Anblicks Public IPs are referred, please use the following set of IPs:
    - *203.88.128.214*
    - *27.109.11.126*
    - *122.170.1.185*
- Please do not directly refer to already available terraform modules for resource creation. Whole terraform script needs to be created by team members.
- All Azure related tasks should maintain naming conventions as mentioned in:

https://docs.microsoft.com/en-us/azure/cloud-adoption-framework/ready/azure-best-practices/naming-and-tagging

eg:

<resource type>-<workload/application>-<environment>-<azure region>-<instance in 2 digits>

- Most common resource types naming convention are provided below. For resources naming convention of which are not mentioned below, refer to the above link

Resource Type	Naming Convention Format	Example
Virtual Network	*vnet-<team>-<environment>-<region>-<instance>*	vnet-teama-dev-eastus-01
Subnet	*snet-<team>-<subnet type>-<environment>-<region>-<instance>*	snet-teama-public-dev-eastus-01
Network Security Groups	*nsg-<app><allow/deny>-<instance>*	nsg-weballow-01
Virtual Machine	*vm<team>machine<instance>*	vmteamamachine01
Storage Account	*st<team>storage<instance>*	stteamastorage01
Key Vault	*kv-<team>-<instance>*	kv-teama-01

- Use the following tags/labels for all the resources that support tags:
  - Department: CloudOps
  - TeamName: TeamE
  - CreatedBy: Terraform
  - Environment: Dev
  - CreatedDate: <Date of resource creation> - Should not be a static value and should be calculated by Terraform when the resource gets created.
- Demo of 15-30 minutes to be given after submission date during which team needs to show:
  - Overview of Terraform scripts
  - Resource creation and deletion using terraform commands
  - Standards followed in terraform scripts